



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/851,387      | 05/09/2001  | Mitsuhiro Nada       | 205002US2           | 3902             |

22850 7590 03/16/2004

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

|          |
|----------|
| EXAMINER |
|----------|

VERBITSKY, GAIL KAPLAN

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2859

DATE MAILED: 03/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

*Supplemental*  
**Notice of Allowability**

Application No.

09/851,387

Examiner

Gail Verbitsky

Applicant(s)

NADA, MITSUHIRO

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 11/18/2003 and tel on 02/24/2004.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☒ The drawings filed on 09 May 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance              |
|   | 9. <input type="checkbox"/> Other _____.   |

*G. Verbitsky*  
*94 2859 03/08/2004*

*Supplemental*

**DETAILED ACTION**

**SUPPLEMENTAL EXAMINER'S AMENDMENT**

1. This Examiner's amendment is to substitute the Examiner amendment (Paper # 03/03/2004).
2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Oblon/ Mr. Pous on February 24, 2004.

Claims 4-6 and 11-13 stay in the application and are amended as follows: see attachment to the Office action/ Examiner's Amendment.

**Conclusion**

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices and methods.

Any inquiry concerning this communication should be directed to the Examiner Verbitsky who can be reached at (571) 272-2253 Monday through Friday 8:00 to 4:00 ET.

GKV

Gail Verbitsky  
Primary Patent Examiner, TC 2800



March 08, 2004

Claim 4. (Currently Amended) A method ~~of estimating a temperature~~ according to claim 2, wherein the first object is a stator iron core of an electric motor, wherein the second object is a stator coil of the electric motor, and wherein the step (d) includes a process of determining the temperature increment quantity  $\Delta T$  in accordance with a specific value substantially indicating the amount of energization of the electric motor from the relation between the predetermined temperature increment quantity  $\Delta T$  and the specific value substantially indicating the amount of energization of the electric motor.

Claim 5. (Currently Amended) A method ~~of estimating a temperature~~ according to claim 4, wherein the step (c) includes a process of determining the temperature of the stator iron core on the basis of the temperature of a coolant for cooling the stator of the electric motor and the specific value substantially indicating the amount of energization of the electric motor.

Claim 6. (Currently Amended) A method ~~of estimating a temperature~~ according to claim 1, wherein the second object is a stator iron core of an electric motor, wherein the first object is a coolant for cooling the stator of the electric motor, and wherein the step (d) includes a process of determining the temperature of the stator iron core on the basis of the coolant temperature and a specific value substantially indicating the amount of energization of the electric motor.

*attachment to the Examiner's  
Amendment 1.*

Claim 11. (Currently Amended) A ~~temperature estimation~~ device according to claim 9, wherein the first object is a stator iron core of an electric motor, wherein the second object is a stator coil of the electric motor, and wherein the estimation portion determines the temperature increment quantity  $\Delta T$  in accordance with a specific value substantially indicating the amount of energization of the electric motor from the relation between the predetermined temperature increment quantity  $\Delta T$  and the specific value substantially indicating the amount of energization of the electric motor.

Claim 12. (Currently Amended) A ~~temperature estimation~~ device according to claim 11, wherein the temperature determination portion determines the temperature of the stator iron core on the basis of the temperature of a coolant for cooling the stator of the electric motor and the specific value substantially indicating the amount of energization of the electric motor.

Claim 13. (Currently Amended) A ~~temperature estimation~~ device according to claim 8, wherein the second object is a stator iron core of an electric motor, wherein the first object is a coolant for cooling the stator of the electric motor, and wherein the estimation portion determines the temperature of the stator iron core on the basis of the coolant temperature and a specific value substantially indicating the amount of energization of the electric motor.

*attachment to the Examiner's  
amendment*